

REMARKS

Claim 1-15 are pending. Claims 10-15 are withdrawn due to a restriction requirement. Claim 1, 7, and 9 are currently amended. Claim 9 is amended to depend only on claim 1. The remaining amendments to claims 1, 7, and 9 are editorial and do not change the scope of the claims. Accordingly, no new matter is added and entry is respectfully requested.

Claim Objections

Claims 1-9 are objected to over informalities in claims 1 and 9. The claims are currently amended to address the Examiner's objection. Withdrawal of the objection is respectfully requested.

Please note that the preamble of claim 1 has also been amended to be consistent with component (iv) of this claim, referring to both a fluorescent substance or inorganic contrast medium.

Claim Rejections – 35 U.S.C. §112

Claims 1-9 are rejected under 35 U.S.C. §112, second paragraph as being indefinite. The Examiner asserts that claim 9 is indefinite. Claim 9 is currently amended to address this rejection. Withdrawal is therefore respectfully requested.

Claim Rejections – 35 U.S.C. §102

Claims 1-9 are rejected under 35 U.S.C. §102(b) as being anticipated by Miyazaki et al. (JP 08-133990). Applicants respectfully traverse this rejection for the following reasons.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." MPEP §2131, citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Applicants respectfully submit that each and every element of the presently claimed invention is not set forth in Miyazaki et al. This reference does not expressly or inherently describe a process for producing fluorescent substance or inorganic contrast medium-containing latex polymer particles by conducting a polymerization reaction in an aqueous medium as

presently claimed. Accordingly, a case of anticipation is not established and this rejection must be withdrawn.

With regard to Miyazaki et al., the Examiner states as follows:

Miyazaki et al. further disclose a process to contact ninhydrin (2,2-dihydroxy-1,3-indandione) and hydrindantin with the microsphere having BSA (cow serum albumin) fixed thereon ([0037]–[0038]). (Emphasis added). Office Action, page 4.

As shown by the above quoted section, in Miyazaki et al., after a microsphere has been obtained by the polymerization of (A) a (poly)oxy alkylene derivative and (B) a hydrophobic radically polymerizable monomer, the microsphere is brought into contact with ninhydrin etc., and, thus, ninhydrin etc., are encapsulated or embedded in latex polymer particles, i.e., microspheres. See also, the present specification, page 2, lines 8-15, for a general discussion of this prior art process, referring to Patent Document 4, which on page 3 of the specification is identified as the Miyazaki et al reference relied upon by the Examiner in rejecting the claims.

In the process of the present invention on the other hand, a polymerization reaction of monomers (i) and macromer (ii) is conducted in an aqueous medium which comprises each of components (i) to (iv) as recited in Claim 1. Hence, when latex polymer particles are produced, they have already encapsulated or embedded therein “an inorganic fluorescent substance or an inorganic contrast medium” of component (iv).

As stated above, in the process disclosed by Miyazaki et al., when microspheres are produced by the polymerization of (A) and (B), ninhydrin etc., have not yet been encapsulated or embedded. It is by another different step that ninhydrin etc., are encapsulated or embedded in microspheres. Thus, Miyazaki et al. do not expressly or inherently set forth each element of the present invention. Withdrawal of this rejection is respectfully requested.

Furthermore, Applicants also respectfully submit that the present invention is not obvious over the prior art. As shown in Table 4 at page 40 of the present specification, in Comparative Examples 1-5, after polymer particles have been produced and signal-generating substance is incorporated into the particles, the signal drops to 84.1-78.0 % of the initial intensity after seven days. In Examples 1-5, particles were produced in accordance with the method of the present invention, and 95.5 % to nearly 100 % of the initial signal intensity is maintained after seven days.

Thus, if the particles prepared by the process of the prior art are used as a diagnostic agent, the signal would be lowered by ¼ after seven days and accurate measurement would be impossible. One skilled in the art could not predict the beneficial effects of the process of the present invention from the prior art teachings. Therefore, Applicants submit that the present invention is patentable over the prior art.

Prior art made of record and not relied upon

The Examiner indicates at page 5 of the Office Action, that Kataoka et al. (U.S. 6,881,484 = EP 1 398 635 A1) and Matsuya et al. (Anal. Chem. (2003) 75, pp. 6124-6132) are considered pertinent to Applicants' disclosure. The Examiner also notes that both U.S. '484 and Matsuya et al. have filing dates that are later than the priority date of the present application.

However, both U.S. '484 and Matsuya et al. are available as prior art against the present application unless Applicants are entitled to the benefit of the filing date of their Japanese priority application. For this purpose, Applicants are enclosing a verified English translation of the priority application. [The Examiner has already acknowledged receipt of a copy of the certified copy of the priority application.] Applicants take the position that they are entitled to the benefit of the Japanese priority date, thus overcoming the U.S. '484 and Matsuya et al. references as prior art.

On the other hand, WO 2002/097436, which corresponds to U.S. '484, was published on December 5, 2002 (in Japanese), which is prior to the present priority date. [Applicants note that U.S. '484 and EP '635 are faithful English translations of the WO '436 reference.] Accordingly, WO '436 is available as prior art against the present invention, even though Applicants are entitled to the benefit of their Japanese priority date.

In WO'436, as the Examiner mentions at page 5 of the Office Action, europium chelate, a fluorescent substance, is encapsulated or contained in PEG-coated particle by two separate steps:

- a step (B) for the synthesis of an aldehyde-functionalized PEG-coated particle (emphasis added); and
- another step (C) for the preparation of a europium chelate-containing particle.

Therefore, the process of the present invention, where a fluorescent substance is encapsulated in synthetic polymer particles simultaneously with the formation of said particles,

in a single polymerization step, is distinguishable from the process disclosed in WO'436 (and Matsuya et al.). The prior art references are directed to the production of fluorescent substance-containing particles or nanospheres prepared by two independent steps, like the Miyazaki et al. reference discussed above.

Conclusion

In view of the foregoing amendments and remarks, it is submitted that each ground of objection and rejection set forth by the Examiner has been overcome, and that this application is in condition for allowance. An early reconsideration and Notice of Allowance is respectfully requested.

Respectfully submitted,

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